

Food and Mood

Choosing the right foods and exercising can help banish the blues!

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“Certain foods rich in fat and sugar, such as chocolate, contain chemicals that have a drug-like effect on the brain. Trouble is, those fatty sweets are high in calories.” So what? There are three effects. (Comments in parentheses are mine.)

Effect #1: Stress affects the *hypothalamus-pituitary-adrenal axis*, causing the release of the stress hormones *cortisol* and *epinephrine* by the adrenal glands. These raise your heart rate and blood pressure as an emergency response, but lacking a continued stressor, you soon calm down. However, if the stress is constant or recurring, the HPA axis becomes overactive, leading to depression. “Comfort foods”, high in sugar, fat (and calories) blunt the body’s response to chronic stress. So, the cure for depression can be a bowl of ice cream – sugar and fat calm the HPA axis, and the greater the stress, the more you need. (By the way, atypical depression* is not the subject of this review. See below.)

This cure works because low levels of the neurotransmitters *serotonin* and *dopamine* are involved in depression. Foods rich in carbohydrates (for example, a chocolate bar) trigger a rise in serotonin. Serotonin produces major signals in the brain for satiation, and dopamine indirectly causes feelings of satiation in the gut, so low levels of either results in less “satiation”.

The trouble is that the cortisol and epinephrine get there first, and they not only increase the pleasure of eating sugar, starch and fat, but they also activate fat receptors in the abdomen, leading to increased deposits of fat in these cells. We fight the neurotransmitters that signal satiation!

Effect #2: Cortisol increases insulin resistance, and one effect of insulin is to signal the brain that the body has enough calories. Eating more causes higher insulin resistance and the storage of more fat in the abdomen, and abdominal fat increases the pleasure of eating more. The fatter we are, the more we’re depressed, and around we go!

Effect #3: Obese folks get less feelings of satiation, partially because a third chemical, *ghrelin*, which signals hunger to the brain, is not suppressed in the obese. They “stay hungry”.

OK. There are some things we can do about it!

Thing #1: Find and correct the stressor. Remember that you may be causing your own stress.

Thing #2: Studies show that aerobic exercise can reduce depressive symptoms up to fifty percent. Briefly, 30 minutes of moderately intense aerobic exercise, three times per week for 12 weeks is the equivalent of antidepressants or cognitive therapy in some people with mild to moderate depression, regardless of age. You’ll feel better! Further, the total number of calories eaten per week decreases as caloric expenditure increases.

Thing #3: Some clues about food – and these resound throughout modern nutrition, anyway – are:

- Eat every three to five hours, with three small meals and two snacks that balance complex carbohydrates, protein and healthy fats. This regimen prevents the dips in blood glucose that sap mood and energy.
- Build treats into your diet. (This isn’t about masochism or penance – moderate consumption should be enjoyable. Be proud of your food management.)
- Avoid excessive alcohol intake – alcohol’s a downer, and its calories are empty of nutritional value. Be good to yourself!

- Complex carbohydrates, such as whole grains, are broken down more slowly by the body than simple carbs, preventing spikes in blood glucose levels.
- Unsaturated fats are good for you, and omega-3 (fish oil) fats may help alleviate depression.
- Take a multivitamin containing 100% of the RDAs for folate and vitamin B12. Low levels of both are associated to mood disorders.

Thing #4: So, if you have a “savage mood”, go eat a small candy bar. Enjoy it, and then go take a brisk walk! Enjoy that, too!

* One symptom of “*atypical depression*” is a craving for carbohydrates, leading to sleeping and eating too much, and may need medication. Atypical depression is not the subject of this review. “Typical” medicines for atypical depression include:

• Selective serotonin reuptake inhibitors. (SSRIs are generally safe, but they do have side effects. For a really good description, see <http://www.mayoclinic.com/invoke.cfm?objectid=30C860F3-5656-44A4-9F95A2A487837E7F>.)

• Monoamine oxidase inhibitors. (MAOIs were the first type of antidepressants in use, and may have significant side effects and restrictions. See <http://www.mayoclinic.com/invoke.cfm?objectid=07ECDC2C-C87F-4A5D-8D5EC178ECC4AFEE>.)

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